

AMENDMENTS TO CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A remote video recording and retrieval system comprising:

a first computing device having access to a tuner, to a computer network, and to a video recording mechanism, said first computing device being effective for encoding a video signal into at least one predetermined video data encoding format; and

a second computing device having access to said first computing device via said computer network, and having access to a first data store remote from said first computing device, said second computing device being effective for submitting recording instructions to said first computing device for recording a televised program;

said first computing device being effective for accessing and recording said televised program via said tuner and said video recording mechanism, said first computing device being further effective for transferring a video encoded data version of said televised program as a video encoded data file to said first data store;

wherein said first data store is remote to said second computing device, and said second computing device accesses said first data store via the Internet.

2. (Original) The system of claim 1 wherein said second computing device initiates retrieval of said video encoded data file after recording of said televised program by said first computing device.

3. (Original) The system of claim 1 wherein said computer network is the Internet.

4. (Currently Amended) The system of claim 3-A remote video recording and retrieval system comprising:

a first computing device having access to a tuner, to a computer network, and to a video recording mechanism, said first computing device being effective for encoding a video signal into at least one predetermined video data encoding format; and

a second computing device having access to said first computing device via said computer network, and having access to a first data store remote from said first computing device, said second computing device being effective for submitting recording instructions to said first computing device for recording a televised program;

said first computing device being effective for accessing and recording said televised program via said tuner and said video recording mechanism, said first computing device being further effective for transferring a video encoded data version of said televised program as a video encoded data file to said first data store;

wherein said computer network is the Internet; and

wherein said first computing device automatically initiates transfer of said video encoded data file to said first data store via the Internet.

5. (Original) The system of claim 4 wherein said first computing device transfers said video encoded data file using the Internet file transfer protocol, FTP, utility.

6. (Withdrawn) The system of claim 5 wherein said first data store is internal to said second computing device.

7. (Original) The system of claim 1 wherein said first computing device deletes said video encoded data file upon completion of the transfer of said video encoded data to said first data store.

8. (Cancelled)

9. (Cancelled)

10. (Currently Amended) The system of claim 1 A remote video recording and retrieval system comprising:

a first computing device having access to a tuner, to a computer network, and to a video recording mechanism, said first computing device being effective for encoding a video signal into at least one predetermined video data encoding format; and

a second computing device having access to said first computing device via said computer network, and having access to a first data store remote from said first computing device, said second computing device being effective for submitting recording instructions to said first computing device for recording a televised program;

said first computing device being effective for accessing and recording said televised program via said tuner and said video recording mechanism, said first computing device being further effective for transferring a video encoded data version of said televised program as a video encoded data file to said first data store;

wherein said second computing device specifies a maximum file size for said video encoded data file created by said first computing device.

11. (Original) The system of claim 10 wherein said first computing device divides a recorded televised program into a plurality of contiguous program segment, encoded, data files of size not greater than said maximum file size.

12. (Original) The system of claim 11 wherein said first computing device further generates a master sequence file specifying the order in which said plurality of program segment data files should be played in order to produce a contiguously viewing of said recorded televised program.

13. (Original) The system of claim 12 wherein said first computing device transfers encoded data files and said master sequence file in succession to said first memory store.

14. (Original) The system of claim 13 wherein said first computing device deletes each of said plurality of program segment data files and said master sequence file as their respective transfer to said first data store is complete.

15. (Original) The system of claim 14 wherein said first computing system verifies completion of a file transfer by view the contents of said first data store prior to deleting any file at said first computing device.

16. (Original) The system of claim 15 wherein each of said plurality of program segment data files is transferred to said first data store as a plurality of file fragment data packets and monitors acknowledge signals from said first data store confirming receipt of each data packet, said first computing device maintaining a log of each acknowledged data packet to identify the complete file transfer of each of said program segment data file and to respond to a transmission interruption by reinitiate transmission of only the data packets of a program segment data file that have not already been acknowledged.

17. (Original) The system of claim 16 wherein said first computing device deletes each of said plurality of encoded video data files upon transfer of all of its constituent file fragment data packets to said first data store.

18. (Currently Amended) The system of claim 1-A remote video recording and retrieval system comprising:

a first computing device having access to a tuner, to a computer network, and to a video recording mechanism, said first computing device being effective for encoding a video signal into at least one predetermined video data encoding format; and

a second computing device having access to said first computing device via said computer network, and having access to a first data store remote from said first computing device, said second computing device being effective for submitting recording instructions to said first computing device for recording a televised program;

said first computing device being effective for accessing and recording said televised program via said tuner and said video recording mechanism, said

first computing device being further effective for transferring a video encoded data version of said televised program to said first data store;

wherein said first computing device has a second data store, and said first computing device responds to an inquiry from said second computing device by transmitting to said second computing device a list of scheduled televised programs locally available to said first computing device, an alterable preferred video encoding format selection field, a listing of available free space on said second data store, and an expected available recording time based on the currently selected preferred video encoding format and the currently available free space.

19. (Original) The system of claim 18 wherein said second computing system issues recording instructions to said first computing device by selecting a program for recording from said list of scheduled televised programs.

20. (Original) The system of claim 18 wherein said first computing device permits the selection of at least one of a resolution quality factor and image screen size for each video encoding format, each combination of selected resolution quality factor, image screen size, and video encoding format resulting in a different amount of memory space required per minute of video sequence.

21. (Original) The system of claim 1 wherein said first computing device provides a verification logon sequence for said second computing device prior to permitting access to said second computing device.

22. (Original) The system of claim 1 wherein said first computing device includes a timer and a database of program instructions, said first computing device comparing program start times with said timer and responding to a matching time by adjusting said tuner to the instructions in said database associated with the matching time and activating said recording mechanism, said first computing device further using said database to identify conflicts in recording instructions.

23. (Withdrawn) The system of claim 22 wherein said recording mechanism is a video cassette recording mechanism coupled to said tuner and having a

communication link with said first computing device, said communication link being effective for transmitting start, stop, record, rewind, forward, and play commands from said first computing devise to said video cassette recording mechanism.

24. (Withdrawn) The system of claim 23 wherein said video cassette recording mechanism further includes a video-out terminal coupled to a video-in terminal of said first computing devise, said first computing devise responding to the finishing of a recording session by rewinding a video cassette in said video cassette recording mechanism and playing the recorded program onto said video-out terminal, said first computing device being effecting for encoding the signal on its video-in terminal by using a corresponding video encoding format as determined by said database, said first computing devise storing said encoded image in a second data store.

25. (Withdrawn) The system of claim 24 wherein first computing device initiates transfer of said video encoded data file to said first memory store after all of said recorded program has been encoded.

26. (Withdrawn) The system of claim 24 wherein said first computing device initiates transfer of encoded video data to said first memory store prior to completion of the encoding of said recorded program.

27. (Currently Amended) The system of claim 1-A remote video recording and retrieval system comprising:

a first computing device having access to a tuner, to a computer network, and to a video recording mechanism, said first computing device being effective for encoding a video signal into at least one predetermined video data encoding format; and

a second computing device having access to said first computing device via said computer network, and having access to a first data store remote from said first computing device, said second computing device being effective for submitting recording instructions to said first computing device for recording a televised program;

said first computing device being effective for accessing and recording said televised program via said tuner and said video recording mechanism, said first computing device being further effective for transferring a video encoded data version of said televised program to said first data store;

wherein said first computing device has access to multiple tuners for recording multiple programs airing simultaneously, said first computing device further being effective for alerting said second computing device when the number of simultaneous programs scheduled for recording exceeds the number of available tuners.

28. (Withdrawn) The system of claim 27 wherein said first computing device has access to multiple recording mechanisms, said multiple tuners having a one-to-one correspondence with said multiple recording mechanisms.

29. (Withdrawn) The system of claim 28 wherein said multiple recording mechanisms are one of a plurality of independently controllable video cassette recorders and a plurality of independently controllable digital recording units.

30. (Original) The system of claim 27 wherein said first computing device includes a second memory store divided into multiple memory spaces having a one-to-one correspondence with said multiple tuners.

31. (Original) The system of claim 30 wherein said recording mechanism is a digital recording unit multiplexed among said multiple tuners, said digital recording unit being effective for producing a video encoded data representation of an applied tuner and for storing said video encoded data in the applied tuner's corresponding memory space within said second memory store.

32. (Original) The system of claim 30 wherein said second memory store includes a contiguous composite memory space divided into an upper memory space and a lower memory space and a buffer memory space between said upper and lower memory spaces,

 said multiple tuners including a first tuner corresponding to said upper memory and a second tuner corresponding to said lower memory, said first tuner having an associated first priority level and said second tuner having an

associated second priority level different from said first priority level, the video encoded data corresponding to said first tuner being written in said upper memory space in ascending order toward said lower memory space, and the video encoded data corresponding to said second tuner being written in said lower memory space in descending order toward said upper memory space,

said first computing device being effective for initiating a memory conflict routine when one of the video encoded data corresponding to said first tuner and the video encoded data corresponding to said second tuner is encroaches within said buffer memory space, said memory conflict routine being effective for deactivating the recording of the one of said first and second tuners having the lower associated priority level.

33. (Original) The system of claim 32 wherein said memory conflict routine is further effective for permitting the one of said first and second turners having the higher associated priority level to expanding its corresponding memory space into the memory space of the tuner having the lower associated priority level.

34. (Original) The system of claim 30 wherein each of said digital memory spaces is a separate digital memory storing device, said first computing device being effective for monitoring the amount of available memory within each of said digital memory storing devices and effective for identifying free memory storing devices correspond to tuners that are not currently active, said first computing device further responding to an active tuner filling to capacity its memory storing device by assigned a different free memory storing device to said active turner.

35. (Original) The system of claim 34 wherein each of said multiple tuners has an associated distinct priority level and said first computing device includes a low memory conflict routine responsive to the condition wherein all turners are active and a first active tuner fills to capacity its corresponding memory storing device, said memory conflict routine identifying and deactivating the tuner having the lowest priority level and assigning the memory storing device of the lowest priority tuner to said first active turner.

36. (Original) The system of claim 1 wherein said first computing device verifies that said second computing device has preauthorization prior to accepting any recording instruction from said second computing device, said first computing device responding to an authorization verification of said second computing device by displaying a list of scheduled televised programs available for recording, each of said listed televised programs being part of a database including the televised program's airing time and frequency tuning requirements, said second computing device instructing said first computing device by making selections from said listing.

37. (Original) The system of claim 36 wherein said second computing device is charged a service fee for every recording session submitted to said second computing device.

38. (Original) A media recording and encoding apparatus comprising:

a tuner for receiving broadcast information;

a record and encode mechanism coupled to said tuner and effective for recording and encoding said broadcast information to produce an encoded data file representation of said broadcast information;

a network access node coupled to the Internet for receiving recording instructions;

a data store coupled to said encode and record mechanism and to said network access node;

said apparatus being effective for activating said tuner and said record and encode mechanism in accordance with said recording instructions, storing the resultant encoded data file in said data store, and transmitting said data file via said network access node to a predetermined destination on the Internet.

39. (Withdrawn) The apparatus of claim 38 wherein said record and encode mechanism includes a video tape recording unit for recording said broadcast information and includes a video capture circuit for encoding recorded broadcast information from said video tape recording unit.

40. (Withdrawn) The apparatus of claim 39 wherein said tuner, record and encode mechanism, network access node, and second data store are integral parts of a video cassette recorder.

41. (Withdrawn) The apparatus of claim 38 wherein said apparatus further includes a telephone access node for receiving signals from a touchtone telephone, said apparatus initiating a first mode of operation response to a predetermined sequence of key tones from said touchtone and initiating a second mode of operation in response to the absence of said predetermined sequence of key tones;

said first mode of operation being effective for accepting recording schedule instructions via said touchtone telephone;

said second mode of operation being effective for transmitting a verbal request to the receiver of said touchtone telephone requesting a verbal message from said touchtone telephone, said second mode being further effective for recording said verbal message from said touchtone telephone.

42. (Withdrawn) The apparatus of claim 41 wherein said second mode of operation is further effective for digitally encoding said verbal message and transmitting the resultant digital file via said network access node to a second predetermined destination on the Internet.

43. (Withdrawn) The apparatus of claim 42 wherein said digital file is sent to said second predetermined destination via electronic mail.

44. (Original) The apparatus of claim 38 wherein said tuner is one of a television tuner and a radio tuner.

45. (Original) The apparatus of claim 38 said tuner is one of a plurality of tuners and said second data store further comprising multiple memory storage units having a one-to-one correspondence with each of said plurality of tuners;

each tuner and its corresponding memory storage unit sharing a common status rating indicating if the tuner is active, scheduled for later use, or free, indicating that the tuner is inactive and not scheduled for later use, an active

rating being of higher value than a scheduled rating, and a scheduled rating being of higher value than a free rating;

each tuner and its corresponding memory storage unit further sharing an adjustable priority level, said priority level having a low default value that is selectively adjusted when a tuner is scheduled for later use;

said apparatus being effective for monitoring the available memory space remaining in an active tuner's corresponding memory storage unit and effective for initiating a memory reassignment routine in response to said available memory space being below a predetermined value, said memory reassignment routine being effective for identifying a set of memory storage units having the lowest status rating and assigning the storage unit of lowest priority within the set to said active tuner.

46. (Original) A method of remotely recording and retrieving broadcast information comprising:

a. using a first local computing device to connect to a second remote computing device via a computer network;

b. using said first computing device to submit recording instructions to said second computing device, said recording instructions including a selection of a broadcast station and a recording time window specifying a future time;

c. using said second computing device to tune a broadcast receiver to receive said selected broadcast station and to initiate recording of received signals from said selected broadcast station during said recording time window;

d. encoding said received signals into a predetermined encode format to produce an encoded digital representation of said received signals ;

e. using said second computing device to transmit said encoded digital representation to a predetermined destination via said computer network; and

f. accessing said encoded digital representation from said predetermined destination location.

47. (Original) The method of claim 46 wherein said computer network is the Internet.

48. (Original) The method of claim 46 wherein said broadcast receiver receives television broadcast signals.

49. (Original) The method of claim 46 wherein said broadcast receiver receives radio broadcast signals.

50. (Original) The method of claim 46 wherein said first computing device is further used to submit a maximum file size to said second computing device, and said encoded digital representation is divided into multiple data files of size not grater than said maximum file size.

51. (Original) The method of claim 50 wherein said multiple data files are transmitted to said predetermined destination in step e.

52. (Original) The method of claim 50 wherein step d further includes generating a master sequence file indicating the order in which said multiple data files should be accessed.

53. (Original) The method of claim 46 wherein said predetermined destination is remote from said first computing device and accessible by said first computing device via said computer network.

54. (Original) The method of claim 46 wherein step e includes transmitting said encoded signal representation to said predetermined destination via electronic mail.

55. (Original) The method of claim 46 wherein step e includes transmitting said encoded signal representation to said predetermined destination via file transfer protocol, FTP.

56. (Original) The method of claim 46 wherein each set of recording instructions specifying the selection of a broadcast station and a corresponding recording time window is defined as a recording session, and step b includes submitting multiple recording sessions to said second computing device, said second computing device assigning a different memory space to each of said multiple recording sessions in a one-to-one correspondence, step d including

storing the encoded signal representation of a recording session in its corresponding memory space.

57. (Original) The method of claim 56 wherein step b includes using said first computing device to selectively assign a priority level to said multiple recording session, and second computing device assigning a default priority level to all recording sessions not receiving an assigned priority level from said first computing device.

58. (Original) The method of said 56 wherein each of said multiple recording session includes a priority level and step d includes reassigning a first memory space corresponding to a first recording session having a first priority level to a second recording session having a second priority level higher than said first priority level.

59. (Original) The method of claim 58 wherein said first recording session stores data in said first memory space starting from a first end of said first memory space, and said second recording session stores data in said first memory space starting from a second end of said first memory space opposite said first end.

60. (Original) The method of claim 58 wherein said second recording session has a correspondingly assigned second memory space, and said first memory space is reassigned to said second recording session in response to said second recording session filling a predetermined percentage of said second memory space.